We are often concerned with outdoor air pollution and rarely think about indoor air contaminants. The concentrations of many contaminants indoors exceed the levels outdoors. People spend over 90% of their time indoors and may be exposed to contaminants without realizing it.

Indoor air quality problems have been around for quite some time, although some issues have become more severe. This is partially due to energy conservation measures resulting from the 1973 oil embargo which required homes to be constructed very 'tight'. **The most effective way to control indoor air contaminants is to eliminate the source.** Improving ventilation may also help if the source cannot be eliminated.

Health Effects

Whether a person reacts to a contaminant depends on individual sensitivity, which varies tremendously. Individuals who may be more susceptible are the young, elderly, and chronically ill, especially those persons suffering from cardiovascular disease, asthma, or bronchitis.

Symptoms of poor indoor air quality can be very broad and depend on the contaminant. They can easily be mistaken for other problems such as allergies, stress, colds and flus.

One indication that your symptoms may be caused by indoor air contaminants is that relief occurs soon after leaving a particular room or building.

Biological Contaminants

Biological contaminants include bacteria, molds, mildews, animal dander, dust mites, cockroaches, and pollen. Sources of these contaminants include: standing water or water damaged materials; humidifiers; pets; ventilation systems; and dust.

Symptoms of exposure to biological contaminants include: coughing, sneezing, watery eyes, dizziness and upper respiratory congestion.

Proper cleaning and maintenance of a home can help reduce biological contaminants.

Dust mites thrive in furniture, carpets, bedding, etc.

Prevention:

- Clean the house and vacuum regularly.
- Wash bedding frequently in hot water.

Mold, mildew and bacteria originate in standing water, water damaged materials or on wet surfaces.

Prevention:

- Use exhaust fans vented to the outside in bathrooms and in the kitchen.
- Fix water leaks immediately.

- Clean air conditioners, humidifiers, and dehumidifiers regularly.
- Inspect and clean appliances such as furnaces, heat pumps, and central air conditioners before seasonal use.
- Ventilate the attic and crawl spaces. A plastic cover over dirt in crawl spaces can help prevent moisture.

Combustion Products

Combustion products are produced during a burning process.

Tobacco smoke is a major source of indoor air contaminants. It is a mixture of over 4,000 chemicals and is classified as a known human carcinogen.

People with asthma and other respiratory diseases are often severely affected by exposure to tobacco smoke. Infants and young children whose parents smoke are at increased risk of pneumonia, bronchitis and ear infections. Infants exposed to secondhand smoke have triple the rate of Sudden Infant Death Syndrome compared to infants not exposed to it.

Prevention:

- Do not allow smoking in your house or around your children!

Carbon Monoxide (CO) is a colorless, odorless, poisonous gas. Sources of CO include: natural gas or propane powered appliances, such as stoves and furnaces; fireplaces and wood stoves; automobile exhaust; barbecues; and tobacco smoke. Increased moisture on the inside of windows can be an indication of high CO levels.

Symptoms of CO poisoning include headaches, dizziness, and fatigue and may progress to nausea, convulsions, coma, and death.

Prevention:

- Ensure all gas appliances are maintained and properly vented to the outside. Flames should be blue, not yellow for natural gas.

- Never idle your car in an enclosed garage regardless of whether the door is open or closed.
- Clean and inspect your chimney seasonally.
- Never barbecue, burn charcoal, or use a camp stove indoors.

If you have natural gas or propane powered appliances invest in a carbon monoxide detector for your home.

Carbon dioxide is a gas produced when humans and animals breathe. There is a huge difference between carbon dioxide and carbon monoxide. The concentration of carbon dioxide is related to how many people are in a room and is used as an indicator of how well your home is ventilated. Harmful health effects are unusual and usually only noted when levels are very elevated.

Chemicals

Household Chemicals are found in many commonly used items including hair sprays, rug and oven cleaners, paints, pesticides, dry cleaning products and craft materials. When we use these chemicals in our home, we put them into our air. **Prevention:**

- Read the label and use the product correctly. Use chemicals in a well-ventilated space only.
- Use environmentally friendly cleaning products.

Formaldehyde is used in particle board and plywood and may be found in some types of foam insulation. It may also be found in fabrics, carpets, and paints. Symptoms of formaldehyde exposure include: watery eyes, skin rashes, eye/nose/throat irritation, nosebleeds, asthmatic attacks and may cause cancer.

Prevention:

- Ask about formaldehyde content when purchasing new paneling or pressed wood furniture/cabinetry. Some types of pressed-wood emit less formaldehyde than others.
- Ask the warehouse to lay out new carpet for several days before delivery.
- After installation of materials containing formaldehyde ventilate the area with fans and open windows for 2 to 3 days.

Steps To Improve Indoor Air Quality

1. Prevent the problem from occurring.
2. Remove the source of contaminants if possible.
3. Increase the ventilation.
4. Use air cleaning devices as a last resort. The Health District does not recommend the purchase a cleaner that generates ozone. Ozone is a respiratory irritant and can cause lung problems.

For more information contact:

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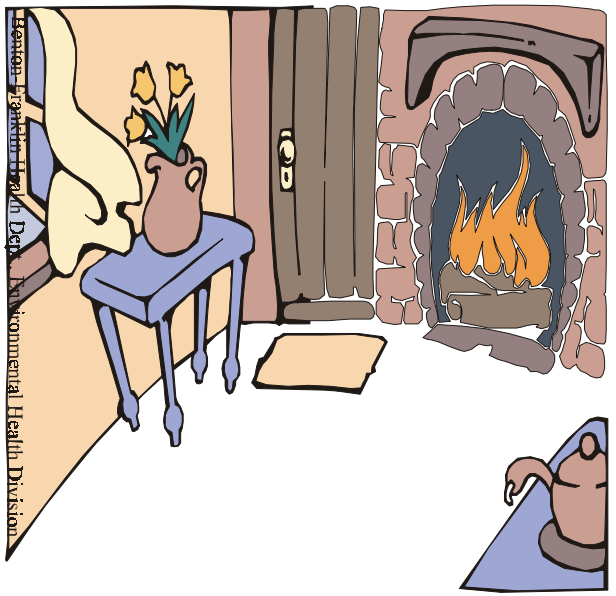
Healthy Air

Reducing Indoor Air Contaminants



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